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TITLE: System for storing and utilizing picture image data
                recorded by digital camera

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Following the rapid spread of personal computers and personal digital
assistants (PDA) recently, there has been a growing demand for utilizing a
picture image recorded by a user as digital image data. As a service provided
by laboratories or DPE's to meet the demand, a digital output service has been
known which records image data in a photo CD or in a large capacity floppy disc
and returns it to a customer when a film, on which image data has been
recorded, is deposited for developing by the customer. Alternatively, a
network photograph service wherein image data are stored in a server computer
installed in a laboratory or in a DPE so that a customer can request download
of the image data via the Internet or the like has been proposed.

In the case where a digital camera stores picture image data recorded
thereby in a removable medium such as a memory card, the picture image data can
be transferred from the digital camera to a personal computer using a reading
apparatus such as a card reader. Furthermore, in the case where a digital
camera belongs to a PDA or a digital camera has a communication function, image
data can be transferred to a personal computer via a modem and a public
telephone line (including portable phones) Moreover, some digital cameras can
transfer image data via infrared communication.

A first picture image data storing and utilizing system of the present
invention comprises an image server which stores picture image data, at least
one medium reading means which transfers picture. image data, recorded by a
digital camera and stored in a removable medium, to the image server by reading
the removable medium, and accessing means which enables the picture image data
stored in the image server to be accessed and utilized.

A second picture image data storing and utilizing system of the present
invention comprises, instead of the medium reading means of the first system,
at least one data transferring means for transferring the picture image data,
recorded by a digital camera and stored in the built-in memory of the digital
camera from the digital camera to the image server.

"The removable medium" herein referred to means, for example, a memory card
or the like inserted in a digital camera. "At least one medium reading means
which transfers picture image data recorded by a digital camera and stored in a
removable medium to the image server by reading the removable medium" means a
card reader and a cable to connect the card reader with the image server, for
example "The data transferring means" refers to a cable interface, a docking
station, and a communication line as described above, for example. The
communication channel means not only means using wires but also includes using

other methods of date **transfer** such as radio infrared communication or a portable phone for example.

"Enables the picture image data stored in the image server to be accessed and utilized" means, for example, to utilize all kinds of services having been carried out at a DPE or having been proposed as a **network** photograph service, such as the case where the image data are browsed, searched for, downloaded, ordered for a print, output in a floppy disc or the like, and transferred to a specified apparatus.

"The accessing means" is meant to include not only communication equipment and channels which make an access from a personal computer or a PDA via a **network** possible, but also other things such as a monitor and inputting means, including a keyboard and a touch panel for example, which are both connected directly to the image server. The software to be installed in the server computer, that is, the software whereby a request for a service is received, and picture image data are displayed, searched for, and transferred in response to the request, and by which an outputting apparatus such as a printer is controlled, obviously may be included as part of the accessing means.

In other words, "at least one medium **reading means which transfers** picture **image** data recorded by a **digital camera** and stored in a removable medium to the **image** server by **reading** the removable medium" or "at least one data **transferring means for transferring** the picture **image** data recorded by a **digital camera** and stored in the built-in memory of the **digital camera from the digital camera to the image** server" means, for example, to include any necessary equipment and means for **transferring** the obtained **image** data to the **image** server, such as a card **reader,** a docking station, the temporary storage server, a modem, a transceiver, a cable, and a telephone line.

By comprising the data transferring means for transferring picture image data recorded by a digital camera to the image server installed in a DPE or the like, and accessing means for enabling the digital image data stored in the image server to be accessed, the picture image data storing and utilizing system of the present invention can store picture image data by using a method which is convenient and appropriate for the situation, regardless of the **type of digital camera** or whether or not the user carries or possesses a personal computer, and can utilize the picture image data in various methods.

Some digital cameras have the function of compressing picture image data to save memory space when the picture image data obtained by recording using the cameras are stored in the cameras' memories. However, the processing time for recording is shorter when no compression is carried out on the image data. Therefore, a digital **camera of such a type** does not necessarily compress the image data for all recordings, and a user of such a camera can often select whether or not the compression is carried out by switching a mode or the like. Therefore, the judgment as to whether or not the image data have been compressed may be carried out based upon necessity when picture image data are stored·in the image server 6, and the picture image data without compression may be stored in the image server 6 after compression of the image data by the image server 6. In the case where a cable connection or a communication channel connection is used for data transfer, it is preferable to compress picture image data using a digital camera so that the time necessary for the transfer of the data becomes shorter.

For example, the file name can be determined by a combination of information such as the type code and the product No. code of a digital **camera, the type** code and the product No. code of a removable medium, the possessor code of the digital camera and the removable medium, the date of recording, the date of data transfer, the number of the transfer within a day, and the frame number in the built-in memory or in the removable medium. The file name may be determined by combining the frame number and the receipt number which is determined by combining the name of the image server and the date of data transfer for example, when the transferred picture image data are received by the image server 6.

at least one medium **reading means for reading** picture **image** data from a removable medium, said picture **image** data being recorded by the **digital camera** and stored in the removable medium, wherein the **image** data is **transferred** to a remotely located **image** server which stores the **transferred** picture **image** data; and

at least one medium **reading means for reading** picture **image** data from a removable medium and **transferring** the picture **image** data to the **image** server, wherein the picture **image** data is stored by the **digital camera** in the removable medium; and